

1 **REMARKS**

2 Claims 3, 6-8, 11-12, and 14-32 are canceled. Claims 33-47 are new.
3 Claims 1-2, 4-5, 9-10, 13 and 33-47 are currently pending in the application. In
4 view of the following remarks, Applicant respectfully requests the forwarding of
5 the application on to issuance.

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7 **Examiner Interview**

8 Applicant conducted a telephone interview with Examiner Savage on May
9 1, 2007. During this interview, and in the interest of advancing prosecution, the
10 pending claims were discussed. Since Examiner Savage has only recently been
11 assigned this case, Applicant and Examiner Savage agreed that the best course of
12 action with respect to advancing the prosecution of this application is to address
13 the previous Examiner's arguments in the last Office Action, mailed 12/13/2006.
14 In addition, Examiner Savage agreed to review the new claims submitted by
15 Applicant in this response.

16 Applicant thanks Examiner Savage for taking the time to discuss the
17 prosecution of this application with Applicant.

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19 **The Double-Patenting Rejection**

20 Claims 1, 2, 4, 5, 9, 10 and 13 are rejected on the grounds of non-statutory
21 double patenting over claims 8 and 10 of U.S. Patent Application Serial No.
22 11/171,002.

1 While Applicant is willing to consider filing a terminal disclaimer if
2 necessary, Applicant respectfully requests that these rejections be held in abeyance
3 until the indication of allowable subject matter.

4
5 **The §102(b) Rejections over Nikolaidis**

6 Claims 1, 2, 4, 5, 9, 10 and 13 stand rejected under 35 U.S.C. §102(b) as
7 being anticipated by U.S. Patent No. 6,132,623 to Nikolaidis et al. (hereinafter
8 "Nikolaidis"). Alternatively, claims 9 and 10 stand rejected under 35 U.S.C.
9 §103(a) as being obvious over Nikolaidis in view of U.S. Patent No. 6,200,482 to
10 Winchester et al. (hereinafter "Winchester").

11 Applicant respectfully traverses the Office's rejection and submits that the
12 Office has mischaracterized Nikolaidis, which does not describe, teach, or suggest
13 continuously regenerating the filter media.

14 Specifically, claims 1 and 4 recite continuously regenerating a reactive
15 filter media while simultaneously filtering contaminants from fluid flowing
16 through the filter media. Claim 9 recites similar features. Claims 2 and 5,
17 depending from Claims 1 and 4 respectively, recite that regenerating the reactive
18 filter media comprises agitating a mixture of metal granules and the filter media.
19 Claim 10, depending from Claim 9, recites similar features.

20 The Office argues that the "filter media of [Nikolaidis] process will
21 inherently be continuously regenerated for the same reason that Applicant's
22 mixture of sand and iron granules functions in this manner." Office Action page
23 4. The Office's argument is not sufficient to sustain the rejections for two reasons.

1 First, it ignores other claim features and, second, the argument is factually not
2 accurate.

3 1. The Other Claim Features: Claims 1 and 4 require continuously
4 regenerating a reactive filter media while simultaneously filtering contaminants
5 from fluid flowing through the sand. As detailed below, even if it is assumed
6 Nikolaidis teaches the regenerating acts recited in Claims 2 and 5, he does not
7 teach performing these acts while simultaneously filtering contaminants from fluid
8 flowing through the sand. The Office's apparent assertion to the contrary is not
9 correct.

10 In Nikolaidis, the contaminated water is either (1) passed through a column
11 of iron filings and sand or (2) admixed or shaken up with the iron filings and sand.
12 For column treatment see Nikolaidis column 5, lines 55-59; Figs. 3-5 and
13 accompanying text at columns 5-6; and Examples 3-4 described at column 8. For
14 admixing/shaking treatment, see Nikolaidis column 5, lines 52-55 (admixing) and
15 examples 1-2 described at column 7 (shaking).

16 The column treatment described in Nikolaidis, of course, does not include
17 agitating a mixture of metal filings and sand. To the extent the admixing/shaking
18 treatment described in Nikolaidis might be deemed to include agitating the
19 mixture of metal filings and sand (and water), there is no filtering of contaminants
20 because the water is not flowing through the filter media. Indeed, there is no fluid
21 flow at all in Nikolaidis' admixing/shaking treatment -- the treatment takes place in
22 a closed container and contaminants are removed from the water only through the
23 chemical process of adsorption. Chemical processes such as adsorption and the
24 mechanism of filtering are not the same. The distinction between these two types
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1 of contaminant removal is explicitly recognized in the Specification. See, for
2 example, Specification paragraph 0015 ("The process creates and utilizes a
3 reactive filter media that removes contaminants by filtering and by adsorption. A
4 reactive filter media is any filter media with the additional capability of removing
5 contaminants from waste water through chemical processes such as adsorption.
6 The iron oxide coated sand bed, a reactive filter media, screens contaminants from
7 the water and the reactive surfaces of the granules of sand adsorb contaminants
8 from the water.").

9 2. The Office's Argument is Factually Not Accurate:

10 Claims 2 and 5, depending from Claims 1 and 4 respectively, recite that
11 regenerating the reactive filter media comprises agitating a mixture of metal
12 granules and the filter media. That is to say, in Claims 2 and 5 the act of
13 regenerating includes the act of agitating a mixture of metal granules and the filter
14 media. To anticipate Claims 2 and 5 as well as the base claims, Claims 1 and 4,
15 Nikolaidis must teach the act of regenerating. It is not sufficient that Nikolaidis
16 teach agitating a mixture of iron filings and sand without also teaching such
17 agitation is performed under circumstances or in combination with such other acts
18 that constitute regenerating the filter media.

19 For example, in Nikolaidis' examples 1 and 2, the iron filings and sand
20 maybe be so diluted in the water that shaking the bottles is not sufficient to abrade
21 the surface of the sand granules -- abrasion is the physical mechanism for
22 regenerating active sites on the sand granules through agitation. See Specification
23 paragraph 0017. To establish inherency, the Office must show that the missing
24 descriptive matter is necessarily present in the thing described in the reference,
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1 and that it would be so recognized by persons of ordinary skill. Inherency may not
2 be established by probabilities or possibilities. The mere fact that a certain thing
3 may result from a given set of circumstances is not sufficient. MPEP § 2112,
4 paragraph IV.

5 Abrading the surface of the sand granules is not necessarily present in the
6 shaker bottles of Nikolaidis. The fact that such abrasion may occur is not
7 sufficient to support the Office's inherency argument.

8 For all of these reasons, Claim 1, 4 and 9 and their respective dependent
9 claims distinguish patentably over Nikolaidis (and the combination of Nikolaidis
10 and Winchester for Claims 9 and 10).

11 Claim 13 recites a reactive filtration method that includes passing waste
12 water through a moving mixture of sand and metal granules. As detailed above, in
13 Nikolaidis' column treatment the mixture of iron filings and sand is not moving
14 and in his admixing/shaking treatment, the water is not passing over the mixture.
15 Claim 13 and its dependent claims, therefore, distinguish patentably over
16 Nikolaidis.

17 All pending claims are felt to be in condition for allowance.

18 Alternatively, Claims 9 and 10 were rejected under Section 103 as being
19 obvious over Nikolaidis in view of Winchester (6200482). The rejections are all
20 based on the assertion that Nikolaidis teaches continuously regenerating the filter
21 media. As noted above, this assertion is not correct.

1 **The §102(f) Rejections over Moller**

2 Claims 1, 2, 4, 5, 9, 10 and 13 stand rejected under 35 U.S.C. §102(f) as
3 being unpatentable over U.S. Patent Application Serial No. 11/171,002 to Moller
4 (hereinafter "Moller").

5 Applicant notes that it filed a correction of inventorship under rule 1.48 on
6 November 8, 2006. Accordingly, for at least this reason, applicant respectfully
7 requests that this rejection be withdrawn.

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10 **Conclusion**

11 All of the claims are in condition for allowance. Accordingly, Applicant
12 requests a Notice of Allowability be issued forthwith.

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16 Dated: 5/14/2007

Respectfully Submitted,

By: 

Richard Bucher
Reg. No. 57,971